COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
South Central Regional Office

STATEMENT OF LEGAL AND FACTUAL BASIS

Griffin Pipe Products Co.
10 Adams St., Lynchburg, Virginia
Permit No. SCRO30397

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Griffin Pipe Products Co. has applied for a Title V Operating Permit for its Lynchburg facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Engineer/Permit Contact: _____ Date: 8/21/06

Air Permit Manager: _____ Date: 8/21/06

Regional Director: _____ Date: 8/21/06

FACILITY INFORMATION

Permittee
Griffin Pipe Products Co.
1400 Opus Place, Suite 700
Downers Grove, IL 60515

Facility
Griffin Pipe Products Co.
P.O. Box 740, Lynchburg, VA 24505

EPA Identification Number: 51-680-00095

SOURCE DESCRIPTION

NAICS Code: 331511 SIC: 3321 - Cast iron pipe manufacturing

Griffin Pipe Products Co., Inc. is a manufacturer of ductile iron pipe. Operations at the facility can be conducted twenty-four (24) hours per day, seven (7) days per week, fifty-two (52) weeks per year. The facility manufactures ductile iron pipe by melting scrap iron in a cupola using coke as fuel and treats the molten iron with additives to make ductile iron. The molten iron is poured into water cooled centrifugal casting machines to make pipe that is used in water supply systems. After casting, the pipe is processed in an annealing oven. The pipe is then finished by grinding and cutting where necessary to meet specification, lined with a thin layer of cement, and painted. The facility has the capability to produce 50 tons of molten iron per hour.

The facility is a Title V major source of PM-10, CO, SO_2, and VOC. This source is located in an attainment area for all pollutants, and is a PSD major source. The facility has not been previously permitted. Several emissions units at the facility have been permitted under Minor NSR permits dated June 21, 2004 and April 27, 2005.

COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit, has been conducted. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility consist of the following:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
Melting Department							
S1	fugitive	Charging System Scrap Steel Handling Coke and Alloy Handling	50 tons/hr	None	N/A	N/A	None
S2	EP57	94" Cupola pre-1972	50 tons/hr 143 MMBtu/hr	None	N/A	N/A	None
	EP83			Afterburner GMD Environ. Tech. fabric filter - Model 05-850	S2A1 S2A2	CO PM-10, metal HAPs	None None
S8	fugitive	Iron Trough	50 tons/hr	None	N/A	N/A	None
S3	EP81	Desulfurization Ladle with N_2 nozzles	50 tons/hr	ETA Engineering fabric filter	S3A1	PM-10, metal HAPs	None
S4	fugitive	Forehearth - Iron Holding Ladle	50 tons/hr	None	N/A	N/A	None
S5	fugitive	Alloy Addition - Dump Car and Scales	50 tons/hr	None	N/A	N/A	None
S6	EP81	Magnesium Plunging Hood	50 tons/hr	ETA Engineering fabric filter	S3A1	PM-10, metal HAPs	None
S20	EP83	Iron Melting Dust Treatment System	1.14 tons/hr	GMD Environ. Tech. fabric filter - Model 05-850	S2A2	PM-10	6/21/2004
S21	EP81	Iron Plunging/Desulfurization Dust Treatment System	1.14 tons/hr	ETA Engineering fabric filter	S3A1	PM-10	6/21/2004

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
S22	EP82	Dust Treatment Chemical Silo	2200 ft^3\100 tons – 20 tons/hr	GMD Enviro. Tech. fabric filter	S22A1	PM-10	4/27/2005
Pipe Making							
S7	fugitive	Centrifugal Casting Machine #1 Centrifugal Casting Machine #2 Centrifugal Casting Machine #3	25.4 tons/hr 29.9 tons/hr 14.0 tons/hr	None	N/A	N/A	None
S10	EP84	Annealing Oven	56 MMBtu/hr	None	N/A	N/A	None
S18	EP44	Shell Sand Silo	100 tons	Whirl Air Flow fabric filter	S18A1	PM-10	None
Finishing							
S11	EP97	Grinder	50 tons/hr	Camcorp fabric filter	S11A1	PM-10	None
S12	fugitive	Quick Dry Paint Pad	5 gal/hr	None	N/A	N/A	None
S13	EP91	Cement Silo	127 tons	Griffin fabric filter	S13A1	PM-10	None
S14	EP92	Sand Silo	127 tons	Griffin fabric filter	S14A1	PM-10	None
S16	EP88, EP89, EP90	Painting Machines #1 & #3	45 gal/hr	None	N/A	N/A	None
S23	EP23	Sand Transfer Silo	75 tons	Dynamic Air fabric filter	S23A1	PM-10	6/21/2004

EMISSIONS INVENTORY

A copy of the 2005 annual emission update is attached. Emissions are summarized in the following tables.

2005 Actual Emissions

	Criteria Pollutant Emission in Tons/Year				
Emission Unit	PM_{10}	SO_2	NO_x	CO	VOC
Cupola (S2) & Dust Treatment (S20)	102.4	91.2	36.9	1072.2	18.8
Desulfurization (S3) & Magnesium Plunging (S6) & Dust Treatment (S21)	4.8				
Metal Treatment (S4, S5, & S8)	10.9				
Pipe Casting (S7)	11.0				
Pipe Annealing (S10)	0.6	0.1	7.5	6.3	0.4
Pipe Grinding & Finishing (S11)	6.6				
Pipe Painting (S12 & S16)					379.0
Drain Out Tubs					1.6
Storage Silos	0.2				
Total	136.5	91.3	44.4	1078.5	399.8

2005 Facility Hazardous Air Pollutant Emissions

Pollutant	Hazardous Air Pollutant Emission in Tons/Yr
Lead	1.4
Manganese Compounds	1.6
Xylene	2.4

EMISSION UNIT APPLICABLE REQUIREMENTS

MELTING DEPARTMENT REQUIREMENTS – CUPOLA (S2), DESULFURIZATION (S3), AND MAGNESIUM PLUNGING (S6), DUST TREATMENT SYSTEMS (S20, S21, S22)

Limitations

The Cupola (S2), Desulfurization (S3), and Magnesium Plunging (S6) were installed prior to 1972 and are subject to Chapter 40 of the Regulations. These units do not have a NSR permit.

Cupola (S2)

- Carbon Monoxide is to be controlled by an afterburner.
- Particulate emissions are to be controlled by a fabric filter (S2A2).
- The approved fuel is coke.
- The particulate emissions standard under 9 VAC 5-40-2410 for a process capacity of 50 tons/hr is 42.0 lbs/hr.
- The sulfur dioxide emissions standard under 9 VAC 5-40-280 B for a process capacity of 143 million Btus/hr (MMBtu/hr) is 377.5 lbs/hr (143 MMBtu/hr × 2.64 lbs/MMBtu).
- Under 9 VAC 5-40-320 the visible emissions standard for the stack is 20%, except for one six-minute period in any one hour of not more than 60%.
- Visible emissions from the fabric filter (S2A2) are limited to 20%, except for one six-minute period in any one hour of not more than 30%, by a NSR permit issued 6/21/2004 for dust treatment system S20.

Desulfurization (S3) and Magnesium Plunging (S6)

- Particulate emissions are to be controlled by a fabric filter (S3A1) as required by DEQ Consent Order dated 9/18/96.
- The particulate emissions standard under 9 VAC 5-40-260 for a process capacity of 50 tons/hr is 44.6 lbs/hr, for each unit.
- The sulfur dioxide emissions standard under 9 VAC 5-40-280 A is 2000 ppm by volume, for each unit.
- Visible emissions from the fabric filter (S3A1) are limited to 20%, except for one six-minute period in any one hour of not more than 30%, by a NSR permit issued 6/21/2004 for dust treatment system S21.

Dust Treatment Systems (S20, S21, & S22) are subject to Chapter 50 of the Regulations. These units are subject to NSR permits.

- Particulate emissions from dust treatment systems S20 are to be controlled by a fabric filter (S2A2), as required by a NSR permit issued 6/21/2004.
- Particulate emissions from dust treatment systems S21 are to be controlled by a fabric filter (S3A1), as required by a NSR permit issued 6/21/2004.
- Particulate emissions from dust treatment system silo S22 are to be controlled by a fabric filter (S22A1), as required by a NSR permit issued 4/27/2005.
- The throughput of treatment material for dust treatment system S20 is not to exceed 693 tons per year, as required by a NSR permit issued 6/21/2004.
- Emissions from the operation of the dust treatment system S20 shall not exceed the limits for particulate matter of 2.7 lbs/hr and 7.6 tons/yr or for PM-10 of 2.7 lbs/hr and 7.6 tons/yr, as required by a NSR permit issued 6/21/2004.
- The throughput of treatment material for dust treatment system S21 is not to exceed 29 tons per year, as required by a NSR permit issued 6/21/2004.
- The throughput of treatment chemical through the bulk silo S22 is not to exceed 18,250

tons per year, as required by a NSR permit issued 4/27/2005.

- Visible emissions from the treatment chemical bulk silo (S22) fabric filter (S22A1) shall not exceed 5 percent opacity, as required by a NSR permit issued 4/27/2005.

Monitoring
Each of the fabric filters S2A2, S3A1, and S22A1 shall be equipped with a device to continuously measure the differential pressure drop across the fabric filter. The device is to be accessible and maintained in proper working order.

Cupola (S2) and fabric filters S2A2 and S3A1 – Periodic monitoring requirements are included in the permit to assure compliance with the opacity standard of 20%.

Dust Treatment System fabric filter S22A1 - Periodic monitoring requirements are included in the permit to assure compliance with the opacity standard of 5%.

Recordkeeping
A list of required records to be kept is included in the permit to assure compliance with the Limitation and Monitoring requirements of the permit.

Testing
There are no testing requirements for the emission units in the Melting Department. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting
There are no reporting requirements for the emission units in the Melting Department.

Streamlined Requirements
None

PIPE CASTING DEPARTMENT REQUIREMENTS – CASTING (S7), ANNEALING (S10), AND SHELL SAND SILO (S18)

Limitations
The Casting (S7) and Annealing (S10) were installed prior to 1972 and are subject to Chapter 40 of the Regulations. These units do not have a NSR permit. The Shell Sand Silo (S18) is subject to Chapter 50 of the Regulations. This unit does not have a NSR permit.

- Particulate emissions from the Shell Sand Silo (S18) are to be controlled by a fabric filter (S18A1).
- The approved fuels for the Annealing oven (S10) are natural gas and fuel oil.

- For the Casting Process (S7) the particulate emissions standard under 9 VAC 5-40-260 for the three pipe casting is as follows:
  Machine #1: 35.8 lbs/hr for a process capacity of 25.4 tons/hour ($4.1 \times 25.4^{0.67}$)
  Machine #2: 39.9 lbs/hr for a process capacity of 29.9 tons/hour ($4.1 \times 29.9^{0.67}$)
  Machine #3: 24.0 lbs/hr for a process capacity of 14.0 tons/hour ($4.1 \times 14.0^{0.67}$)
- For the Annealing Oven (S10) the particulate emissions standard under 9 VAC 5-40-260 for a process capacity of 50 tons/hour is 44.6 lbs/hr.
- For the Annealing Oven (S10) the sulfur dioxide emissions standard under 9 VAC 5-40-280 for a process capacity of 56 MMBtu/hr is 147.8 lbs/hr (56 MMBtu/hr × 2.64 lbs/MMBtu)
- Under 9 VAC 5-40-80 the visible emissions standard for the Annealing Oven (S10) is 20%, except for one six-minute period in any one hour of not more than 60%.
- Under 9 VAC 5-50-80 the visible emissions standard for the Sand Shell Silo (S18) fabric filter (S18A1) is 20%, except for one six-minute period in any one hour of not more than 30%.

Monitoring
Annealing oven (S10) stack and Sand Shell Silo (S18) fabric filter (S18A1) - Periodic monitoring requirements are included in the permit to assure compliance with the opacity standard of 20%.

Recordkeeping
A list of required records to be kept is included in the permit to assure compliance with the Limitation and Monitoring requirements of the permit.

Testing
There are no testing requirements for the emission units in the Casting Department. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting
There are no reporting requirements for the emission units in the Casting Department.

Streamlined Requirements
None

FINISHING DEPARTMENT REQUIREMENTS – PIPE GRINDING (S11), QUICK DRY PIPE PAINT (S12), CEMENT SILO (S13), SAND SILO (S14), PIPE PAINTING MACHINES (S16), AND SAND TRANSFER SILO (S23)

Limitations
The Pipe Grinding (S11), Quick Dry Pipe Paint (S12), Cement Silo (S13), Sand Silo (S14), and Pipe Painting Machines (S16) were installed prior to 1972 and are subject to Chapter 40 of the Regulations. These units do not have a NSR permit. Sand Transfer Silo (S23) is subject to Chapter 50 of the Regulations. This unit is subject to a NSR permit.

- Particulate emissions from the Pipe Grinding process (S11) are to be controlled by a fabric filter (S11A1).
- Particulate emissions from the loading of the Cement Silo (S13) are to be controlled by a fabric filter (S13A1).
- Particulate emissions from the loading of the Sand Silo (S14) are to be controlled by a fabric filter (S14A1).
- Particulate matter emissions from the sand transfer silo (S23) are to be controlled by a silo fabric filter (S23A1), as required by a NSR permit issued 6/21/2004.
- Under 9 VAC 5-40-80 the visible emissions standard for the Pipe Grinding (S11) is 20%, except for one six-minute period in any one hour of not more than 60%.
- Under 9 VAC 5-40-80 the visible emissions standard for the Cement Silo (S13) is 20%, except for one six-minute period in any one hour of not more than 60%.
- Under 9 VAC 5-40-80 the visible emissions standard for the Sand Silo (S14) is 20%, except for one six-minute period in any one hour of not more than 60%.
- Under 9 VAC 5-40-80 the visible emissions standard for the Pipe Painting Machines (S16) is 20%, except for one six-minute period in any one hour of not more than 60%.
- Visible emissions from the Sand Transfer Silo (S23) fabric filter (S23A1) shall not exceed 5 percent opacity, as required by a NSR permit issued 6/21/2004.

Monitoring
Pipe Grinding process (S11) fabric filter (S11A1), Cement Silo (S13) fabric filter (S13A1), Sand Silo (S14) fabric filter (S14A1), and Pipe Painting Machines (S16) stack - Periodic monitoring requirements are included in the permit to assure compliance with the opacity standard of 20%.

Sand Transfer Silo (S23) fabric filter (S23A1) - Periodic monitoring requirements are included in the permit to assure compliance with the opacity standard of 5%.

Recordkeeping
A list of required records to be kept is included in the permit to assure compliance with the Limitation and Monitoring requirements of the permit.

Testing
There are no testing requirements for the emission units in the Finishing Department. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting
There are no reporting requirements for the emission units in the Finishing Department.

Streamlined Requirements
None

FACILITY WIDE REQUIREMENTS FOR HAZARDOUS AIR POLLUTANTS EMISSIONS

The facility currently has the potential to emit hazardous air pollutants (HAPs) in quantities greater than the 10/25 ton major source HAP thresholds. Therefore, the facility is subject to the regulations under 40 CFR 63 (National Emissions Standards for Hazardous Air Pollutants for Source Categories), referred to as the MACT regulations. There are three MACT regulations that are currently applicable:

1) Iron and Steel Foundries (40 CFR 63 Subpart EEEEE): Existing sources had to comply with the work practice standards in §63.7700(b) or (c), as applicable, no later than April 22, 2005. An existing source must comply with the requirements in the subpart that apply by the compliance date of April 23, 2007. Major source status for existing affected sources must be determined no later than April 23, 2007.
2) Coating of Miscellaneous Metal Parts and Products (40 CFR 63 Subpart MMMM): An existing source must comply with this subpart by the compliance date of January 2, 2007.
3) Industrial, Commercial, and Institutional Boilers and Process Heaters (40 CFR 63 Subpart DDDDD): An existing boiler or process heater must comply with this subpart by the compliance date of September 13, 2007.

The permit includes the requirement to comply with each of the MACTs listed above by their respective compliance dates, unless the facility obtains federally enforceable limits (synthetic minor limits) on its facility-wide emissions of HAPs to below the major source thresholds prior to the compliance dates. The source has stated its intention to obtain a state operating permit to limit its HAP emissions. If the source does not become a synthetic minor source of HAPs its Title V permit will need to be modified to include more detailed requirements for each MACT.

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110 that apply to all Federal-operating permitted sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions.

FUTURE APPLICABLE REQUIREMENTS

None identified

INAPPLICABLE REQUIREMENTS

The MACT standard for halogenated solvent cleaning in 40 CFR Part 63 Subpart T, and 9 VAC 5 Chapter 60 Article 2, are not currently applicable. The facility does not use any halogenated cleaning solvents in its parts cleaner.

The startup, shut down, and malfunction opacity exclusion listed in 9 VAC 5-40-20 A 3 cannot be included in any Title V permit. This portion of the regulation is not part of the federally approved state implementation plan. The opacity standard applies to existing sources at all times including startup, shutdown, and malfunction. Opacity exceedances during malfunction can be affirmatively defended provided all requirements of the affirmative defense section of this permit are met. Opacity exceedances during startup and shut down will be reviewed with enforcement discretion using the requirements of 9 VAC 5-40-20 E, which state that "At all times, including periods of startup, shutdown, soot blowing and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions."

INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Insignificant emission units include the following:

Emission Unit No.	Emission Unit Description	Citation[1]	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
BL1	Hot water gas-fired boiler	9 VAC 5-80-720 C		2.5 MMBtu/hr
PH1	Gas fired Process Heaters	9 VAC 5-80-720 C		Each unit less than 10 MMBtu/hr

T1	20,000 gal fuel oil storage tank 250 gal gasoline storage tank 1,000 gal hydraulic oil storage tank 500 gal motor oil storage tank 500 gal gear oil storage tank	9 VAC 5-80-720 B	VOC	
PC1	Parts Cleaner	9 VAC 5-80-720 B	VOC	
DO1	Drain-out Tubs	9 VAC 5-80-720 B	PM-10, NOx, SOx, VOC, HAPs	

[1]The citation criteria for insignificant activities are as follows:
9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application
9 VAC 5-80-720 B - Insignificant due to emission levels
9 VAC 5-80-720 C - Insignificant due to size or production rate

CONFIDENTIAL INFORMATION

None

PUBLIC PARTICIPATION

The proposed permit will be placed on public notice in the Lynchburg, VA “News & Advance” from July 6, 2006 to August 5, 2006.